



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, ILLINOIS 60532-4352

March 1, 2023

David P. Rhoades  
Senior Vice President  
Constellation Energy Generation, LLC  
President and Chief Nuclear Officer (CNO)  
Constellation Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: ANNUAL ASSESSMENT LETTER FOR QUAD CITIES NUCLEAR POWER  
STATION, UNITS 1 AND 2 (REPORT 05000254/2022006 AND  
05000265/2022006)

Dear David Rhodes:

The NRC has completed its end-of-cycle performance assessment of the Quad Cities Nuclear Power Station, Units 1 and 2, reviewing performance indicators (PIs), inspection results, and enforcement actions from January 1, 2022, through December 31, 2022. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. The NRC concluded that overall performance at your facility preserved public health and safety. The baseline inspection program was completed at your facility as defined in Inspection Manual Chapter 2515, "Light-Water Reactor Inspection Program - Operations Phase."

The NRC determined the performance at Quad Cities Nuclear Power Station, Unit 1, during the most recent quarter was within the Licensee Response Column, the highest performance category of the NRC's Reactor Oversight Process (ROP) Action Matrix, because all inspection findings had very low safety significance (i.e., Green), and all PIs were within the expected range (i.e., Green).

The NRC determined the performance at the Quad Cities Nuclear Power Station, Unit 2, during the most recent quarter was within the Regulatory Response Column, the second highest performance column of the NRC's Reactor Oversight Process (ROP) Action Matrix. This conclusion was based on a single inspection finding having low-to-moderate safety significance (i.e., White) in the Mitigating Systems Cornerstone originating in the third quarter of 2022 (ML22313A150), and all PIs within the expected range (i.e., Green).

Therefore, in addition to ROP baseline inspections, the NRC plans to conduct a supplemental inspection in accordance with Inspection Procedure 95001, "Supplemental Inspection Response to Action Matrix Column 2 (Regulatory Response) Inputs." This inspection procedure is conducted to provide assurance that the root cause and contributing cause of risk significant performance issues are understood, the extent of condition and the extent of cause are identified, and the corrective actions are sufficient to prevent recurrence. This inspection will be scheduled when you notify the NRC of your readiness.

The enclosed inspection plan lists the inspections scheduled through December 31, 2024.

The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last twelve months of the inspection plan are tentative and may be revised. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

In response to the COVID-19 public health emergency (PHE), the NRC adjusted inspection plans and schedules to safeguard the health and safety of both NRC and licensee staff while still effectively implementing the ROP. While the PHE continues, overall conditions throughout the country support performance of our inspection and oversight activities returning to normal onsite presence by our resident and region-based inspectors and completion of nominal baseline inspection samples. We continue to monitor site-specific conditions and, as discussed in our November 2, 2021, memo, "Implementation of Inspection Programs Following Re-Entry from the Public Health Emergency for the Reactor Safety Program" (ML21295A302), it may be necessary to alter how and when we perform our inspection and oversight activities as we balance the importance of protecting the health and safety of our staff with the need to conduct effective oversight that supports the NRC's critical safety mission.

For inspections requiring extensive coordination with offsite organizations, such as evaluated emergency preparedness exercises, NRC guidance and frequently asked questions for security and emergency preparedness can be found here: <https://www.nrc.gov/about-nrc/covid-19/security-ep/>. Similarly, the NRC has developed guidance if force-on-force inspections cannot be completed as scheduled due to an emergency, such as the COVID-19 PHE. These changes help ensure the health and safety of both NRC and licensee staff while maintaining the NRC's important safety and security mission during the COVID-19 PHE. The attached inspection plan is accurate on the date of issuance but remains subject to change based on approval of potential exemption requests or other changes needed due to changing conditions in the COVID-19 PHE. NRC staff will contact your appropriate regulatory affairs staff in order to coordinate inspection planning and scheduling.

Beginning on January 1, 2023, the engineering inspection frequency will transition from a triennial (3-year) to a quadrennial (4-year) cycle. The new engineering inspection program will consist of a "Comprehensive Engineering Team Inspection (CETI)"<sup>1</sup> and three "Focused Engineering Inspections (FEIs)" that will be performed in each quadrennial cycle. For the cycle beginning in 2023, the FEIs will be: "Fire Protection Team Inspection," "Commercial Grade Dedication" and an engineering inspection that reviews age-related degradation and management<sup>2</sup>.

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<sup>1</sup> Aspects of the Design Basis Assurance Inspection (DBAI), Evaluations of Changes, Tests, & Experiments, and Heat Sink inspections will be included in the new CETI inspection. Previously scheduled Evaluation of Changes, Tests, & Experiments and Heat Sink inspections have been cancelled and removed from attached Report 22.

<sup>2</sup> The Age-Related Degradation procedure is publicly, and the NRC plans to implement the first inspection of this type beginning in July 2023.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Mr. Robert Ruiz at 630-829-9732 with any questions you have regarding this letter.

Sincerely,

**/RA/**

Julio F. Lara, Director  
Division of Operating Reactor Safety

Docket Nos. 05000254, 05000265, and  
07200053  
License Nos. DPR-29 and DPR-30

Enclosure:  
Inspection Plan

cc: Distribution via LISTSERV®

Letter to David P. Rhoades from Julio F. Lara dates March 1, 2023.

SUBJECT: ANNUAL ASSESSMENT LETTER FOR QUAD CITIES NUCLEAR POWER  
STATION, UNITS 1 AND 2 (REPORT 05000254/2022006 AND  
05000265/2022006)

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**OFFICIAL RECORD COPY**

# Site Inspection Activity Plan

## 07200053 - Quad Cities (ISFSI)

01/01/2023 - 12/31/2024

| Unit                          | Start     | End       | Activity | CAC    | Title   | Staff Count |
|-------------------------------|-----------|-----------|----------|--------|---|-------------|
| ISFSI Security Inspection     |           |           |          |        |   | 1           |
|                               | 4/24/2023 | 4/28/2023 | IP 81311 | 001006 | Physical Security Requirements for Independent Spent Fuel Storage Installations |             |
| ISFSI Cask Loading Inspection |           |           |          |        |   | 2           |
|                               | 6/24/2024 | 6/28/2024 | IP 60855 | 001001 | Operation Of An ISFSI   |             |

# Site Inspection Activity Plan

## Quad Cities

01/01/2023 - 12/31/2024

| Unit   | Start      | End       | Activity     | CAC    | Title   | Staff Count |
|--|------------|-----------|--------------|--------|---|-------------|
| <b>Quad Cities January 2023 Initial License Exam</b>                                   |            |           |              |        |   | 4           |
| 1,2  | 1/1/2023   | 1/7/2023  | OV           | 000956 | FB-OR-ONSITE VALIDATION OF INITIAL LICENSE EXAMINATION (OV)                     |             |
| 1,2  | 1/29/2023  | 2/4/2023  | EXAD         | 000500 | FB-OR-INITIAL LICENSE EXAM ADMINISTRATION (EXAD)                                |             |
| 1,2  | 2/5/2023   | 2/10/2023 | EXAD         | 000500 | FB-OR-INITIAL LICENSE EXAM ADMINISTRATION (EXAD)                                |             |
| <b>Corporate Security Baseline Inspection</b>  |            |           |              |        |   | 3           |
| 1,2  | 1/23/2023  | 1/27/2023 | IP 71130.08  | 000740 | Fitness For Duty Program  |             |
| <b>Security Baseline Inspection</b>  |            |           |              |        |   | 1           |
| 1,2  | 2/27/2023  | 3/3/2023  | IP 71130.02  | 000734 | Access Control  |             |
| 1,2  | 2/27/2023  | 3/3/2023  | IP 71130.08  | 000740 | Fitness For Duty Program  |             |
| 1,2  | 3/20/2023  | 3/24/2023 | IP 71130.07  | 000739 | Security Training   |             |
| 1,2  | 4/24/2023  | 4/28/2023 | IP 71130.09  | 001656 | Security Plan Changes   |             |
| 1,2  | 4/24/2023  | 4/28/2023 | IP 71151     | 001338 | Performance Indicator Verification  |             |
| 1,2  | 4/24/2023  | 4/28/2023 | IP 81311     | 000831 | Physical Security Requirements for Independent Spent Fuel Storage Installations |             |
| <b>Inservice Inspection Unit 1</b>   |            |           |              |        |   | 1           |
| 1  | 3/27/2023  | 4/7/2023  | IP 71111.08G | 000701 | Inservice Inspection Activities (BWR)   |             |
| <b>Radiation Protection Baseline Inspection</b>  |            |           |              |        |   | 1           |
| 1,2  | 4/3/2023   | 4/7/2023  | IP 71124.01  | 000725 | Radiological Hazard Assessment and Exposure Controls                            |             |
| <b>Cyber Security Inspection</b>   |            |           |              |        |   | 4           |
| 1,2  | 5/15/2023  | 5/19/2023 | IP 71130.10  | 000741 | Cybersecurity   |             |
| <b>Radiation Protection Baseline Inspection</b>  |            |           |              |        |   | 1           |
| 1,2  | 6/5/2023   | 6/9/2023  | IP 71124.03  | 000727 | In-Plant Airborne Radioactivity Control and Mitigation                          |             |
| 1,2  | 6/5/2023   | 6/9/2023  | IP 71124.04  | 000728 | Occupational Dose Assessment  |             |
| <b>Security Baseline Inspection</b>  |            |           |              |        |   | 1           |
| 1,2  | 9/5/2023   | 9/8/2023  | IP 71130.14  | 000743 | Review of Power Reactor Target Sets   |             |
| <b>Emergency Preparedness Baseline Inspection / Performance Indicator Verification</b> |            |           |              |        |   | 1           |
| 1,2  | 9/25/2023  | 9/29/2023 | IP 71114.02  | 000717 | Alert and Notification System Testing   |             |
| 1,2  | 9/25/2023  | 9/29/2023 | IP 71114.03  | 000718 | Emergency Response Organization Staffing and Augmentation System                |             |
| 1,2  | 9/25/2023  | 9/29/2023 | IP 71114.05  | 000720 | Maintenance of Emergency Preparedness   |             |
| 1,2  | 9/25/2023  | 9/29/2023 | IP 71151     | 001397 | Performance Indicator Verification  |             |
| <b>Comprehensive Engineering Team Inspection</b>                                       |            |           |              |        |   | 7           |
| 1,2  | 10/16/2023 | 11/3/2023 | IP 71111.21M | 000713 | Comprehensive Engineering Team Inspection                                       |             |
| <b>Quad Cities Biennial Requalification Program Inspection</b>                         |            |           |              |        |   | 2           |

# Site Inspection Activity Plan

|  |            |            |                 |        |   |   |
|--|------------|------------|-----------------|--------|---|---|
| 1,2  | 11/13/2023 | 11/19/2023 | IP 71111.11B    | 000704 | Licensed Operator Requalification Program and Licensed Operator Performance                   |   |
| <b>Radiation Protection Baseline Inspection</b>  |            |            |                 |        |   | 1 |
| 1,2  | 11/13/2023 | 11/17/2023 | IP 71124.08     | 000732 | Radioactive Solid Waste Processing & Radioactive Material Handling, Storage, & Transportation |   |
| <b>Corporate Security Baseline Inspection</b>  |            |            |                 |        |   | 3 |
| 1,2  | 1/22/2024  | 1/26/2024  | IP 71130.01     | 000733 | Access Authorization  |   |
| <b>Emergency Preparedness Exercise Inspection / Performance Indicator Verification</b> |            |            |                 |        |   | 5 |
| 1,2  | 2/26/2024  | 3/1/2024   | IP 71114.07     | 000722 | Exercise Evaluation - Hostile Action (HA) Event   |   |
| 1,2  | 2/26/2024  | 3/1/2024   | IP 71151        | 001397 | Performance Indicator Verification  |   |
| <b>Security Baseline Inspection</b>  |            |            |                 |        |   | 1 |
| 1,2  | 2/26/2024  | 3/1/2024   | IP 71130.01     | 000733 | Access Authorization  |   |
| 1,2  | 2/26/2024  | 3/1/2024   | IP 71130.02     | 000734 | Access Control  |   |
| 1,2  | 2/26/2024  | 3/1/2024   | IP 71130.09     | 001656 | Security Plan Changes   |   |
| 1,2  | 2/26/2024  | 3/1/2024   | IP 71151        | 001338 | Performance Indicator Verification  |   |
| 1,2  | 4/1/2024   | 4/5/2024   | IP 71130.04     | 000736 | Equipment Performance, Testing, and Maintenance   |   |
| <b>Inservice Inspection Unit 2</b>   |            |            |                 |        |   | 1 |
| 2  | 3/18/2024  | 3/29/2024  | IP 71111.08G    | 000701 | Inservice Inspection Activities (BWR)   |   |
| <b>Radiation Protection Baseline Inspection</b>  |            |            |                 |        |   | 2 |
| 1,2  | 3/18/2024  | 3/22/2024  | IP 71124.01     | 000725 | Radiological Hazard Assessment and Exposure Controls  |   |
| 1,2  | 3/18/2024  | 3/22/2024  | IP 71124.03     | 000727 | In-Plant Airborne Radioactivity Control and Mitigation  |   |
| <b>Quad Cities May 2024 Initial License Exam</b>                                       |            |            |                 |        |   | 4 |
| 1,2  | 4/21/2024  | 4/27/2024  | OV              | 000956 | FB-OR-ONSITE VALIDATION OF INITIAL LICENSE EXAMINATION (OV)                                   |   |
| 1,2  | 5/26/2024  | 6/1/2024   | EXAD            | 000500 | FB-OR-INITIAL LICENSE EXAM ADMINISTRATION (EXAD)  |   |
| 1,2  | 6/2/2024   | 6/7/2024   | EXAD            | 000500 | FB-OR-INITIAL LICENSE EXAM ADMINISTRATION (EXAD)  |   |
| <b>Radiation Protection Baseline Inspection</b>  |            |            |                 |        |   | 1 |
| 1,2  | 6/24/2024  | 6/28/2024  | IP 71124.07     | 000731 | Radiological Environmental Monitoring Program   |   |
| <b>Functional Engineering Inspection - Aging of SSCs</b>                               |            |            |                 |        |   | 3 |
| 1,2  | 8/5/2024   | 8/23/2024  | IP 71111.21N.04 | 001832 | Age-Related Degradation   |   |
| <b>Biennial Problem Identification and Resolution Inspection</b>                       |            |            |                 |        |   | 4 |
| 1,2  | 9/9/2024   | 9/27/2024  | IP 71152B       | 000747 | Problem Identification and Resolution   |   |
| <b>Force-on-Force Planning and Exercises - QUAD</b>                                    |            |            |                 |        |   | 5 |
| 1,2  | 10/7/2024  | 10/11/2024 | IP 71130.03     | 000735 | Contingency Response - Force-On-Force Testing   |   |
| 1,2  | 10/28/2024 | 11/1/2024  | IP 71130.03     | 000735 | Contingency Response - Force-On-Force Testing   |   |
| <b>Radiation Protection Baseline Inspection</b>  |            |            |                 |        |   | 1 |
| 1,2  | 11/4/2024  | 11/8/2024  | IP 71124.08     | 000732 | Radioactive Solid Waste Processing & Radioactive Material Handling, Storage, & Transportation |   |